



Fabrication of Machine components

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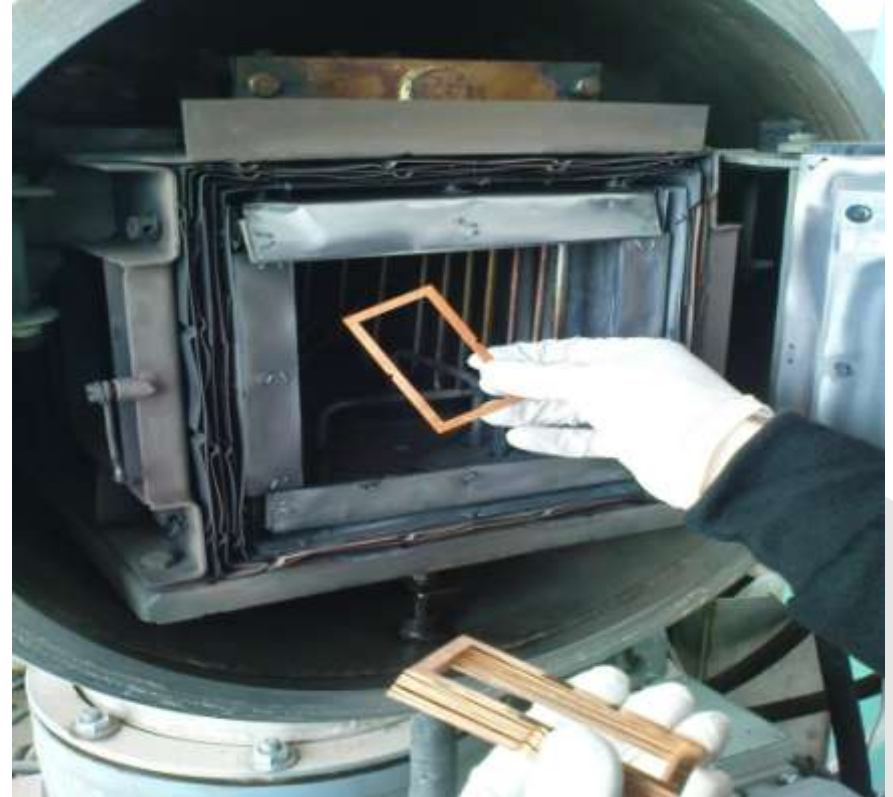
1. RF gaskets
2. RF Gun Photo-Cathode
3. Mirror holder
4. 3 axis coordinate table for magnetic measurement
5. Solenoid magnet
6. Dipole magnet

RF waveguide gasket fabrication



Laser cutting

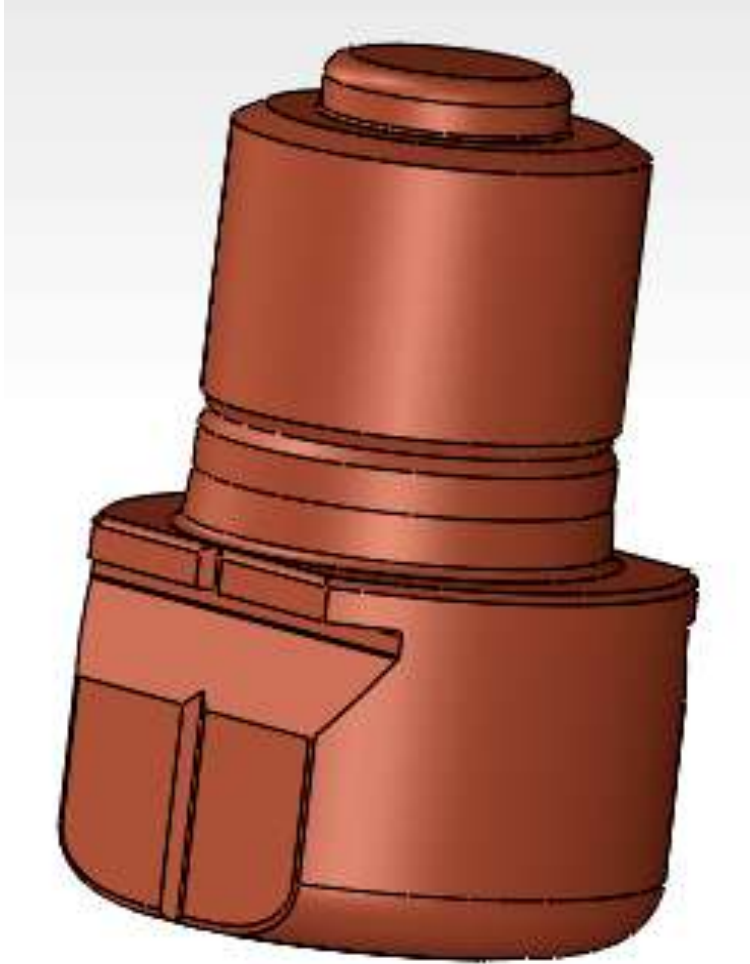
Material of gaskets is copper



Heat treatment (in vacuum annealing) of gaskets

Heating temperature - 700-750 C

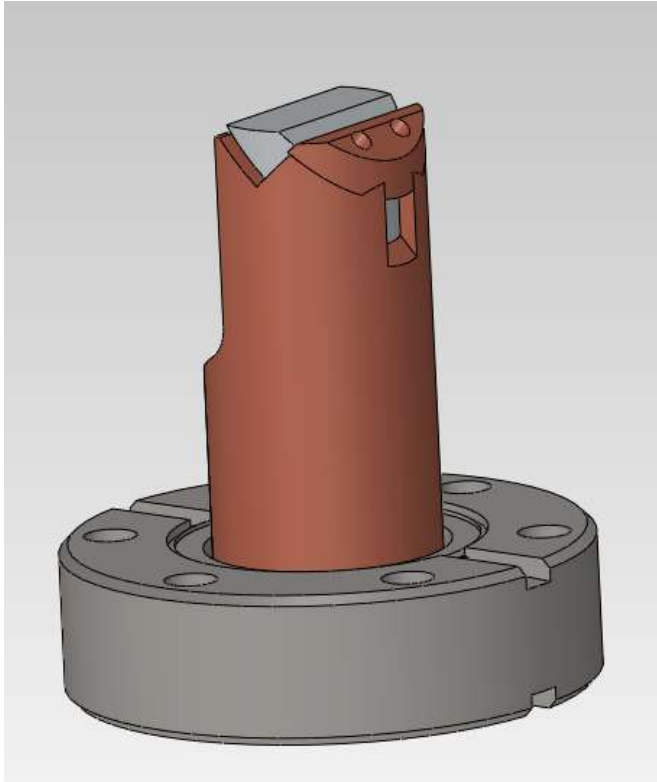
RF Gun Photo-Cathode fabrication



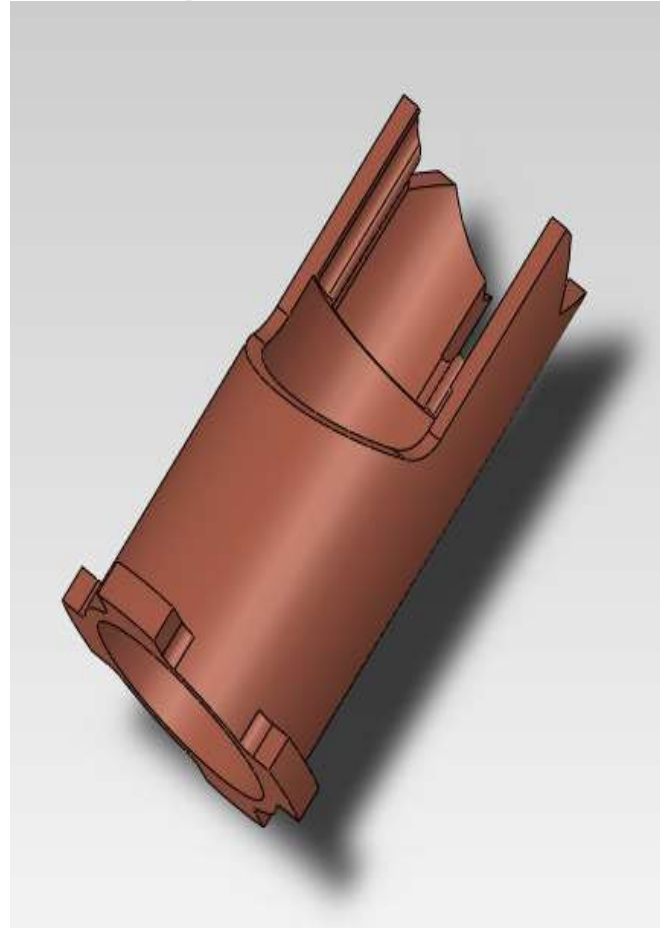
1. lathe turning
2. coarse polishing
3. Wire Electrical Discharge Machining
4. Electro-chemical polishing and laser treatment

Material - Copper C110

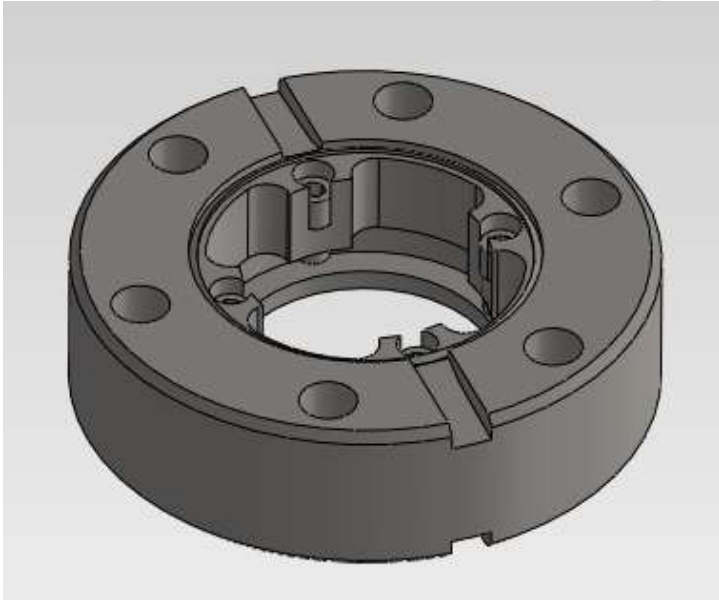
Mirror holder fabrication



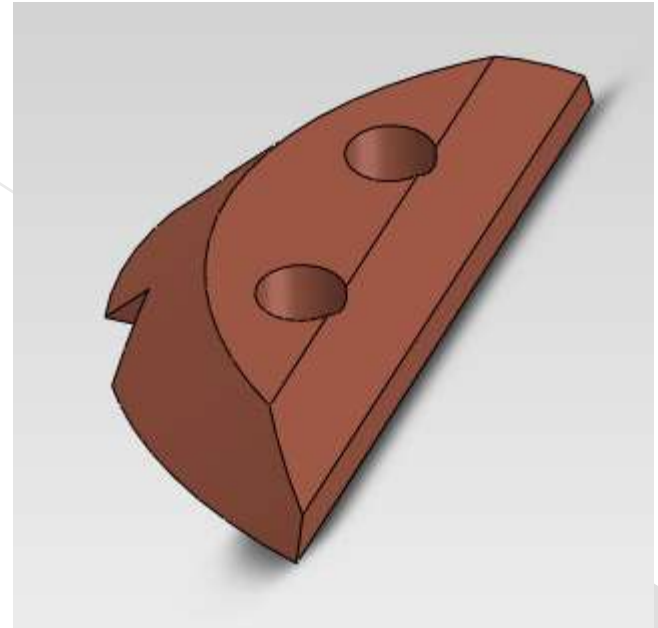
Assembly drawing



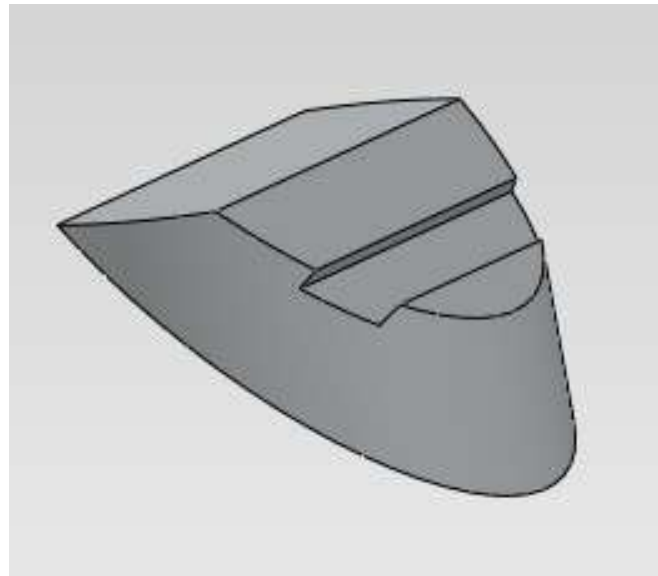
Tube of mirror holder(Cu)



Double sided flange

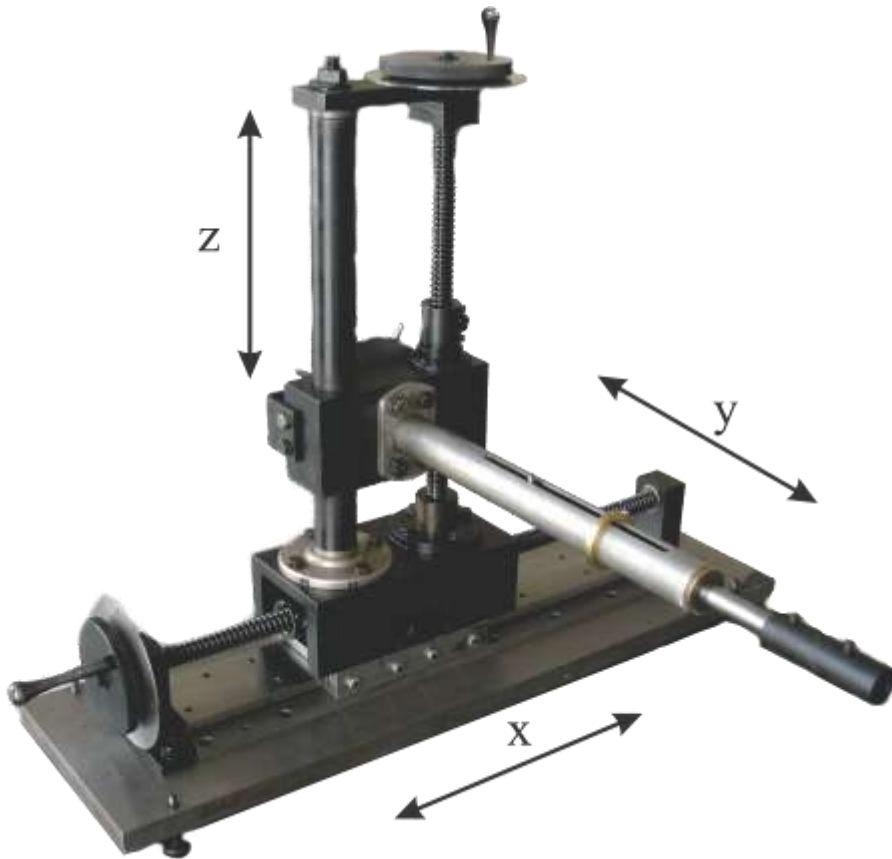


Mirror mount(Cu)



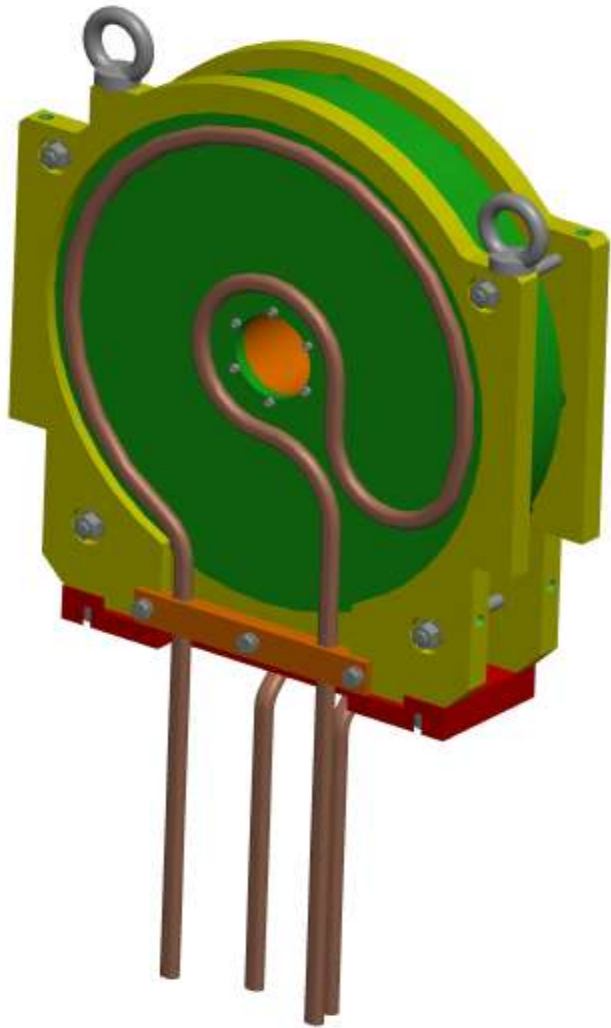
Mirror blank(Al)

3 axis coordinate table for magnetic measurement



Movement
X=300 mm,
y=130 mm,
z=220 mm

Solenoid magnet fabrication

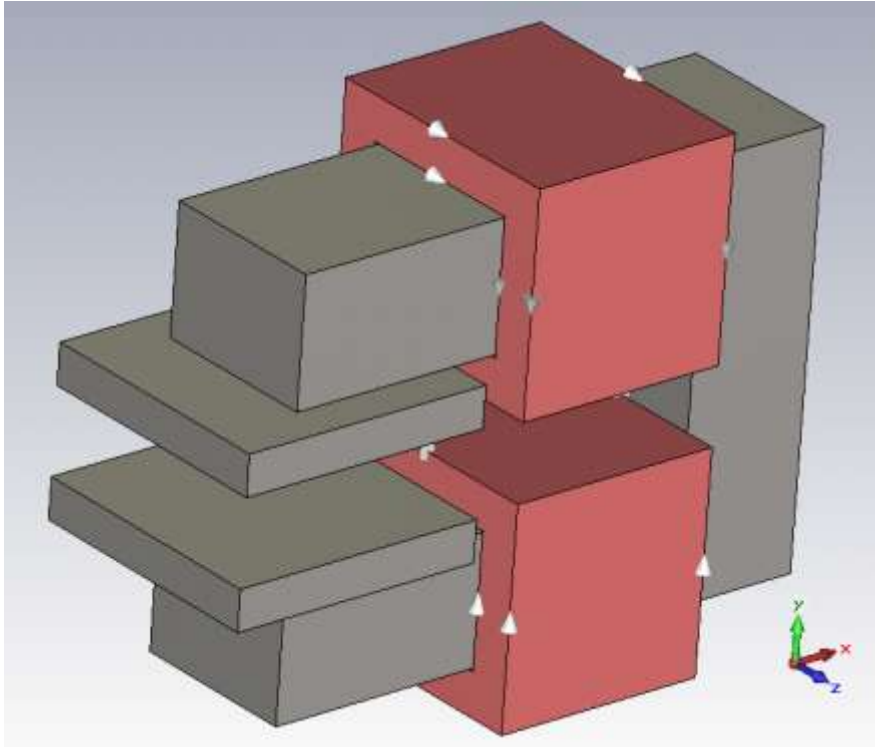


3d drawing

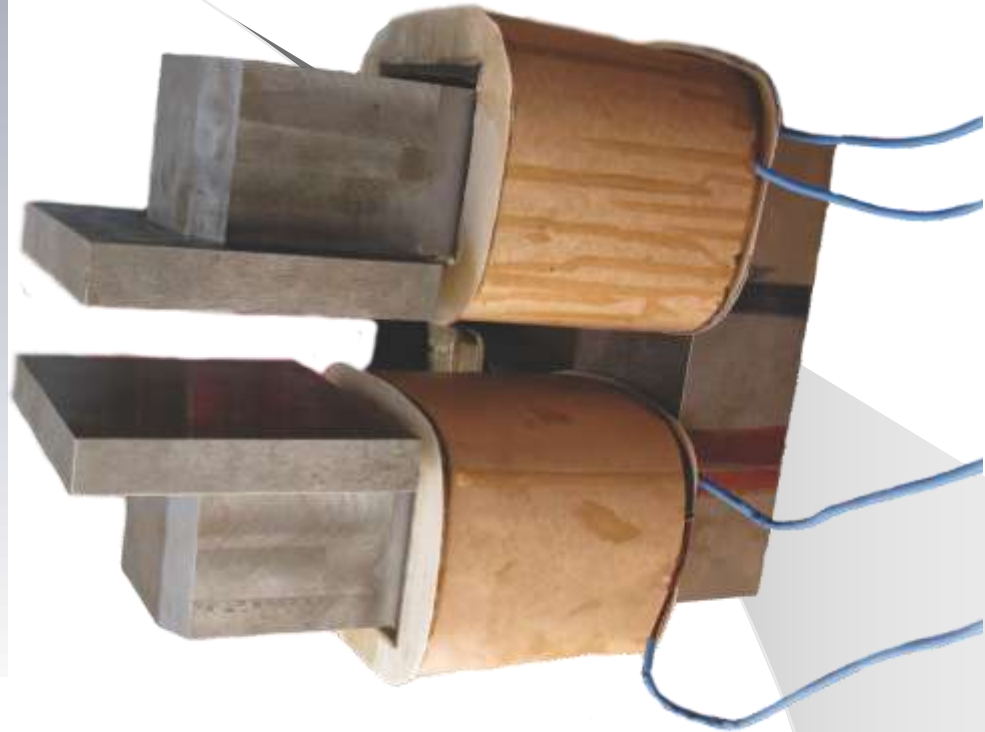


External view of the magnet

Dipole magnet fabrication

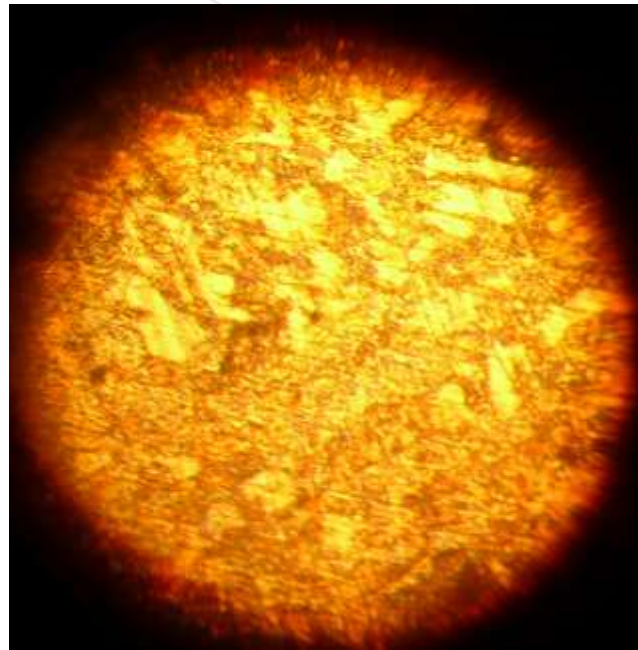
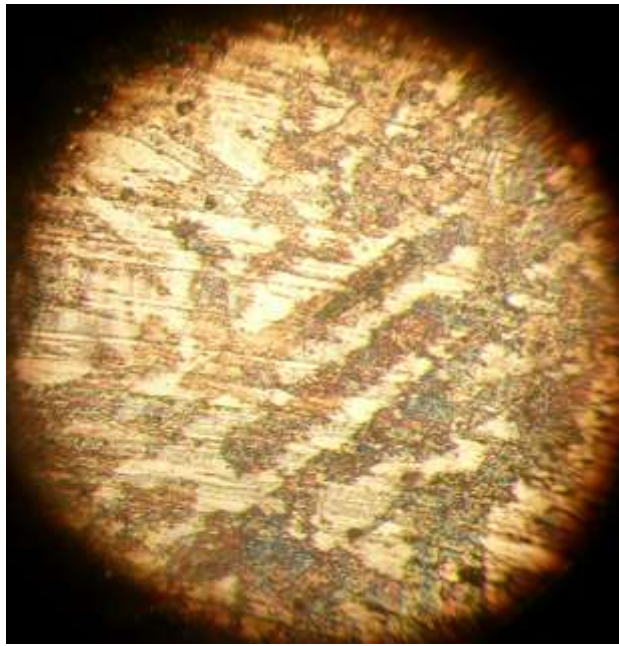


3d drawing



External view of the magnet

Selection of Material for dipole magnet



Microstructure of thin section(x500)

Metallographic microscope МИМ8М (State Engineering University of Armenia, Laboratory of Material science and engineering)

Hardness of material HB=116kg/mm²

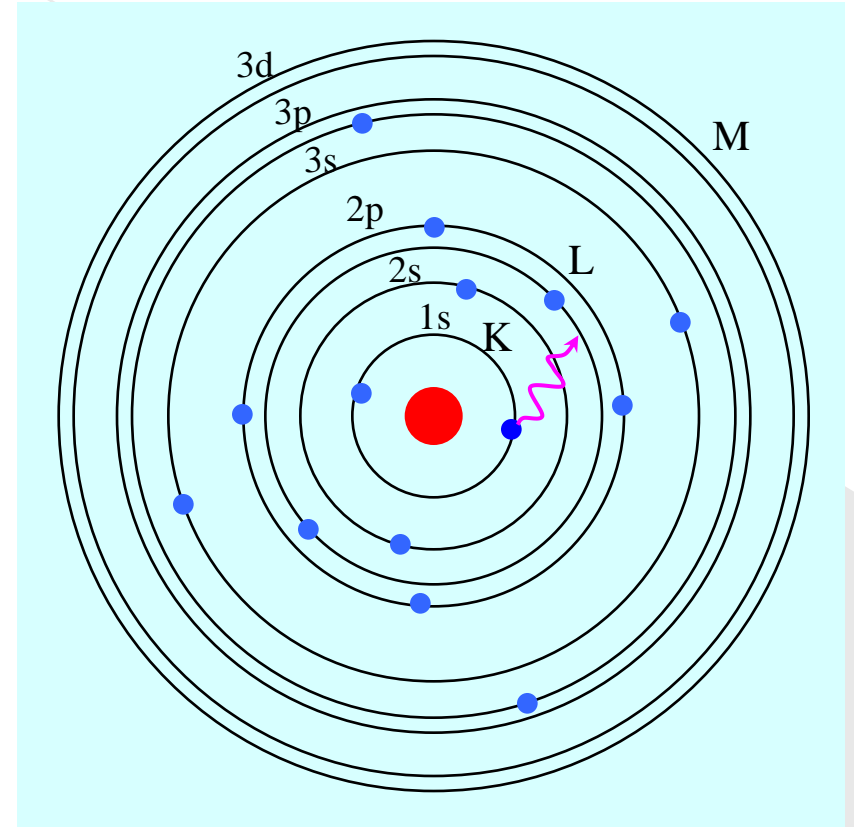
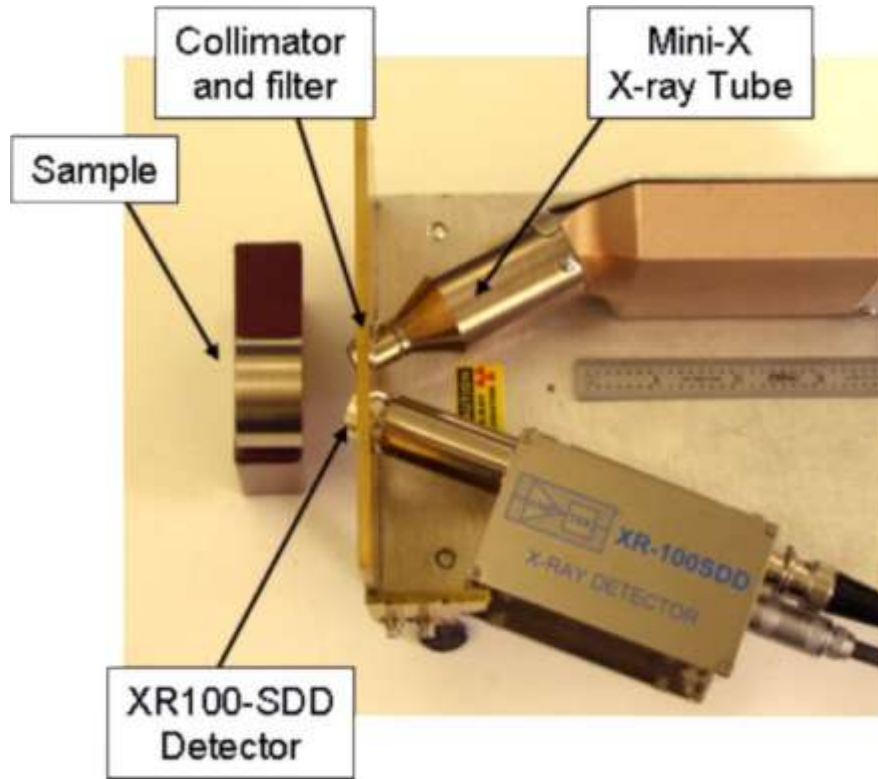
Chemical composition (%) of electro-technical soft magnetic silicon steel

	Si	Mn	Al	Cu	Ni	Mg	Mo	Fe
1*	1.0	0.32	0.13	0.24	0.024	0.0042	0.00042	98.3
2*	----	0.3	---	0.17	0.018	---	---	98.5

1* - Institute of Geological Sciences (spektrometer ДФС-8)

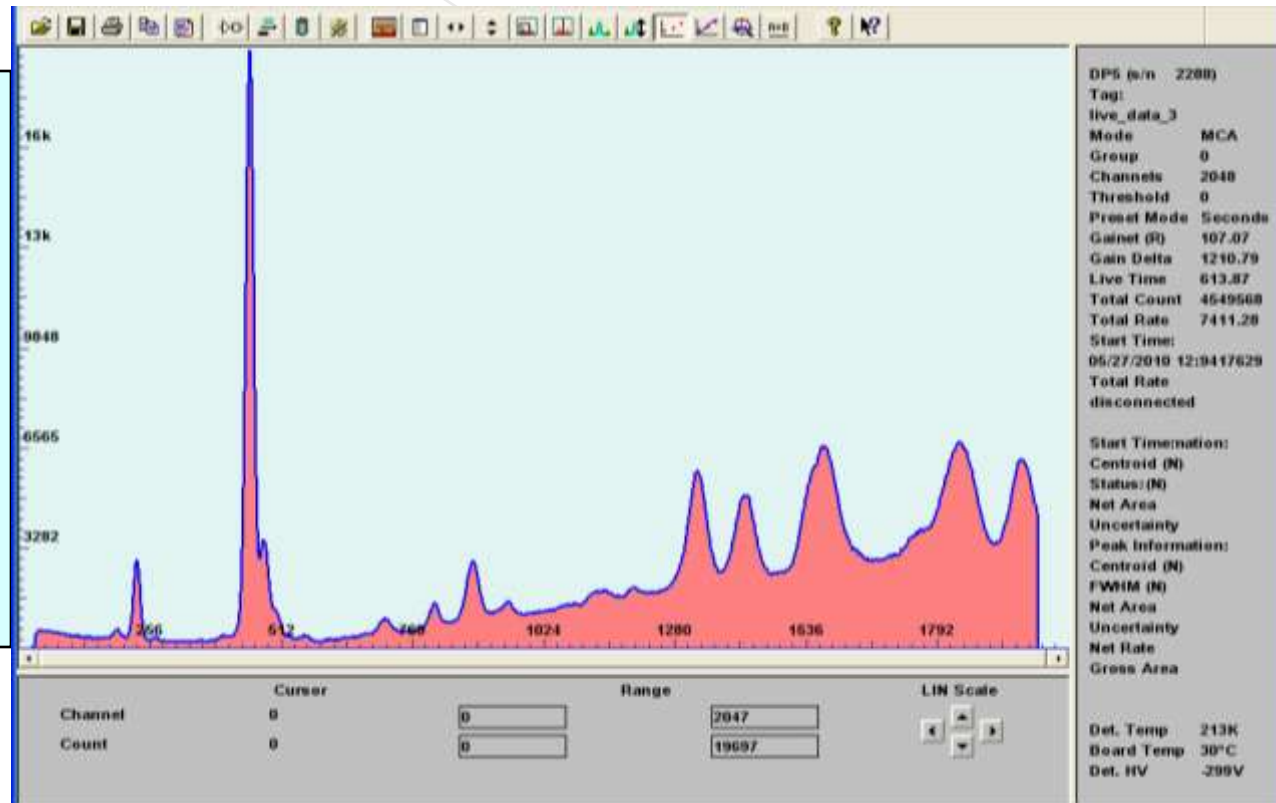
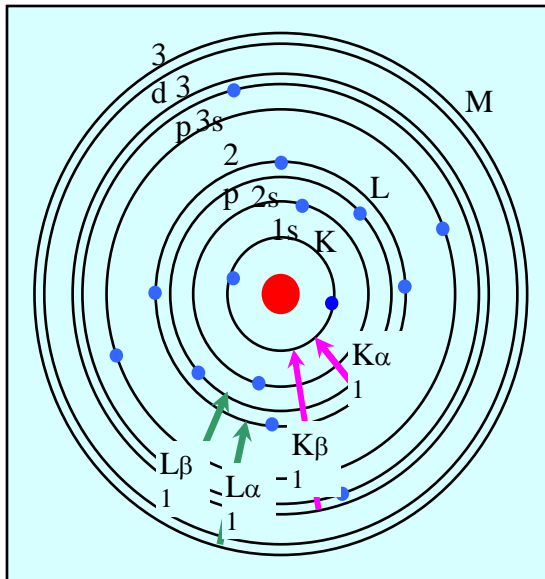
2* - CANDLE X-ray Optics Laboratory (X-RAY Spectrometer AMPTEK)

X-RAY Spectrometer AMPTEK



External view of the apparatus

Work principles



- Calibration of the spectrum
- Identification of the peaks
- The quantitative analysis

Thank you for attention!!!



Engineering Team